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SAMCO: Society Adaptation for coping with Mountain risks in a global change Context

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The SAMCO project aims to develop a proactive resilience framework enhancing the overall resilience of societies on the impacts of mountain risks. The project aims to elaborate methodological tools to characterize and measure ecosystem and societal resilience from an operative perspective on three mountain representative case studies. To achieve this objective, the methodology is split in several points with (1) the definition of the potential impacts of global environmental changes (climate system, ecosystem e.g. land use, socio-economic system) on landslide hazards, (2) the analysis of these consequences in terms of vulnerability (e.g. changes in the location and characteristics of the impacted areas and level of their perturbation) and (3) the implementation of a methodology for quantitatively investigating and mapping indicators of mountain slope vulnerability exposed to several hazard types, and the development of a GIS-based demonstration platform. The strength and originality of the SAMCO project will be to combine different techniques, methodologies and models (multi-hazard assessment, risk evolution in time, vulnerability functional analysis, and governance strategies) and to gather various interdisciplinary expertises in earth sciences, environmental sciences, and social sciences. The multidisciplinary background of the members could potentially lead to the development of new concepts and emerging strategies for mountain hazard/risk adaptation. Research areas, characterized by a variety of environmental, economical and social settings, are severely affected by landslides, and have experienced significant land use modifications (reforestation, abandonment of traditional agricultural practices) and human interferences (urban expansion, ski resorts construction) over the last century.